



6. A method according to Claim 2, wherein the geographic location identified for the router is identified as a geographic location for the second node.

7. A method according to Claim 6, further comprising steps of:  
obtaining information that is based on the geographic location for the second node; and  
transmitting said information from the first node to the second node.

8. A method according to Claim 1, further comprising a step of sending a second probe packet prior to receiving a response from the probe packet.

9. A method according to Claim 8, wherein the second probe packet has a TTL field, wherein an initial value for the TTL field of the second probe packet is set based on the TTL value of the data packet, and wherein the initial value set in the TTL field for the second probe packet is different than the initial value of the TTL field for the probe packet.

10. A method according to Claim 1, further comprising a step of sending a number of probe packets having a same initial value in their TTL fields, wherein the number of probe packets is based on at least one of: value of the location information, an expected datagram loss rate, cost of bandwidth, availability of bandwidth, and network congestion control policies.

11. A method according to Claim 1, further comprising steps of:  
estimating a number of hops taken by the data packet based on the TTL field of the data packet; and  
sending plural probe packets addressed to the network identifier for the second node, wherein initial TTL values for a majority of the probe packets sent in response to the data packet are clustered around the number of hops estimated in said estimating step.

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comparing the network identifier included in at least one of the responses to  
5 a database that includes a geographic location for each of plural network identifiers  
in order to identify a geographic location for the responding network device.

21. A method according to Claim 20, further comprising steps of obtaining information that is based on the geographic location for the second node and transmitting said information from the first node to the second node.

23. A method according to Claim 18, wherein each of the probe packets is designed to elicit a response from a network device upon the earlier to occur of: (i) a specified number of hops that is within a range of the number of hops that the data packet made  $\pm N$ , where N is approximately 5, and (ii) encountering the second node.

25. A method according to Claim 18, wherein the probe packets are sent without waiting to receive a response from any previously sent probe packet.

26. A method according to Claim 18, wherein a number of the probe packets have a same initial value in their TTL fields, and wherein the number of said probe packets is based on at least one of: value of the location information, an expected datagram loss rate, cost of bandwidth, availability of bandwidth, and  
5 network congestion control policies.

27. A method according to Claim 18, wherein the group of network devices from which responses are elicited consists essentially of a first N routers on the inbound path, where N is approximately 5.

28. A method according to Claim 18, wherein initial Time-To-Live (TTL) values for a majority of the probe packets sent in response to the data packet are set based on the number of hops estimated in said estimating step.

29. A method according to Claim 18, further comprising steps of:  
determining, based on responses to the transmitted probe packets, whether a routing anomaly exists; and  
if it is determined that a routing anomaly exists, transmitting a second set of  
5 probe packets.

30. A method according to Claim 18, wherein the data packet is a SYN packet requesting initiation of a TCP/IP connection, and wherein transmission of the probe packets is initiated prior to completion of handshaking required to initiate the TCP/IP connection.

31. An apparatus for use by a first node on a network in determining the geographic location of a second node on the network, comprising:  
receiving means for receiving a data packet over the network from the second node, the data packet including a network identifier for the second node and a Time-  
5 To-Live (TTL) field that has a value, wherein the value of the TTL field for the data packet indicates a maximum additional number of hops that could have been made by the data packet; and

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the requestor to identify a geographic location for the requestor;

requestor; and

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